Cross-campus Cloud Enablement Project - Initiation

The need for public cloud services has increasingly become a necessity for the University of Colorado – whether for research, academic or administrative pursuits. However, the lack of coordinated cloud enablement support across the CU system has led to missed opportunities. Through this initiative, we hope to pool assets to gain efficiencies, enhance overall cloud capabilities and offer a more diverse selection of services to our campuses.

Why Cloud?

Public cloud solutions provide significant benefits that address the increasing demand for highly scalable computing resources across our campuses. Some of those benefits are listed below.

- **Time to Science**: Access to effectively unlimited resources in many cases without waiting in line for shared resource pools can greatly impact the time required to drive results in science.
- **Innovate. Fail fast/pivot quickly**: Not all ideas work well, and/or challenges like funding, prototyping failures and other factors all mean we should often be course correcting or changing approach. This is harder to do if we’ve invested heavily in capital purchases, or committed to long-term licensing agreements.
- **Cost-effective security capabilities**: We can generally rent/deploy services on a pay-as-you-go basis for what might be very expensive to do from an on-prem perspective.
- **Moving "up the stack"**: Public cloud providers offer services that remove the maintenance burden and complexity of undifferentiated work and allow us to focus in areas where our research or applications are truly unique.
- **Gap closure velocity**: When we do identify issues, we can often very quickly address those in the cloud in a manner that’s perhaps harder (and typically slower) on-prem, based on the generally available set of add-on services. These can often add only a limited amount of incremental cost.
- **Effectively unlimited resources**: Whether storage for compliance purposes, regional failover for DR, compute capacity or emerging services, it is far easier to augment capabilities with a rich menu of existing services than to try to build and deploy novel capabilities in-house.
- **Access to the latest resources**: For cutting edge research, cloud can provide access to high numbers of the newest processors (including GPUs) in high volumes that aren’t practical in traditional HPC environments.
- **Technical Security offload**: Once we stop managing certain layers and components, we shift the compliance burden for some subset of total controls to the provider we’re using. We can focus on value creation and operations where it makes sense, and offload those commodity services to the provider (under an appropriate service tier and BAA).
- **Collaboration**: Cloud allows work to be accessed from multiple devices and from anywhere, which in turns makes it much easier for teams to collaborate on shared data.
Funding Opportunities: Initiatives like NIH’s STRIDES and NSF CloudBank support program/projects that want to prepare, migrate and compute on data in the cloud.

Improved access to data: Sharing data sets on collaboration projects is simpler when data is in the cloud.

About the Initiative

The C3 Cloud Enablement Committee [2] was formed to bring together sponsors and stakeholders from CU’s four campuses and UIS to support a more comprehensive, targeted and efficient set of public cloud infrastructure services.

The committee’s goals include:

- Evaluate the current state of our services and seek to understand the future demand for cloud services from our researchers, faculty, students and staff.
- Develop and recommend strategic direction for integration of public cloud infrastructure as a service (IaaS) and platform as a service (PaaS) services across the CU system. Here are definitions for these various cloud services [3].
- Align the Cross-campus Cloud Enablement Committee and its recommendations with cross-campus governance work underway through the C3 program as well as preparing for any Transformation & Innovation Program (TIP) activities to enable productive prioritization and funding discussions.
- Propose one or more potential future shared cloud foundation services and a recommended set of initiatives that would inform how best to implement those services.

Project Approach

<table>
<thead>
<tr>
<th>C3 Cloud Enablement Initiation &amp; Solution Design Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve Initiation Project</td>
</tr>
<tr>
<td>Kick-off</td>
</tr>
<tr>
<td>Current State Assessment</td>
</tr>
<tr>
<td>Listening Sessions</td>
</tr>
<tr>
<td>Solution Design / Shared services opportunities</td>
</tr>
<tr>
<td>Business Plan / Implementation Charters</td>
</tr>
<tr>
<td>Present proposal to campus leadership and stakeholders</td>
</tr>
</tbody>
</table>

Status - Updated 5/18/2021

Kick-off – April 8, 2021 Completed This portion is now completed. [4]

Establish Cloud Committee Membership/Charter – April 19, 2021 Completed This portion is now completed. [4]

Current State Assessment April – June 2021 In Progress This portion of the project is currently in progress. [5]
Stakeholder Outreach Planning – May 2021

This portion of the project is currently in progress. [5]

Stakeholder Listening Sessions – Summer and Fall of 2021

Not Yet Started

This portion of the project is scheduled for a future time. [6]

Solution Design Complete Late & Fall 2021

Not Yet Started

This portion of the project is scheduled for a future time. [6]

Proposed projects defined and approved – Late Fall 2021

Not Yet Started

This portion of the project is scheduled for a future time. [6]

More Info

A series of listening sessions will soon be announced to help evaluate the current and future public cloud service needs across the CU system. If you wish to be involved in these sessions or have any questions about this initiative, please select your campus below.

CU Boulder

oitfeedback@colorado.edu [7]

UCCS [8]

CU Denver/Anschutz [9]

CU System [10]

FAQs

Who will be invited to the listening sessions?

The project’s campus sponsors will identify who will be involved.

How can I provide feedback and input if I cannot attend a listening session?

A feedback form will be available soon.

How will the product of this assessing phase be distributed?

Participants will receive a summary of findings either via email or this web page.

Who will see the current state analysis and solution design results?
All listening session participants will be able to provide feedback on the documents before they are finalized. Results will be public with the acknowledgement that this is the starting point for future discussions. Decisions won’t be made in this solution design phase around the “how.”

**What is being built as part of this initiative?**

A current state analysis and solution design (defining the “what” is possible, not the “how”).

There will be no implementation as part of this initiative. This work is to inform the larger CU cloud strategy, which will be addressed as part of TIP 4.1 [11].

**How will researchers and faculty benefit from this project?**

This project will define implementation projects that we expect will benefit researchers and faculty in the areas of cost-effective security capabilities, offloading of compliance efforts to service providers, added flexibility in scaling compute resources up and down and other benefits that cloud can offer.

Other possible benefits may include reduced overall spend rates based on enterprise agreements and access to free training on how to leverage cloud services.

**Will there be funding for the implementation projects that are proposed to follow this Initiation Project?**

This project is not addressing implementation. Focusing on current state analysis and solution design so there are not funding requests associated with this specific effort.

**Groups audience:**
CU IT Governance

**Sub Title:**
A cross-campus collaborative assessment of current services and needs

**Source URL:** https://www.cu.edu/it-gov/cross-campus-collaboration-c3-forum/cross-campus-cloud-enablement-project-initiation

**Links**
[5] https://www.cu.edu/uis-glossary/progress
[7] mailto:oitfeedback@colorado.edu?subject=Cloud%20Enablement%20Project
[8] https://oit.uccs.edu/
[10] https://www.cu.edu/uis/contact-us